

WHAT IS CLAIMED IS:

1. An isolated polynucleotide comprising a polynucleotide having at least 95% identity to a member selected from the group consisting of:

(a) a polynucleotide encoding a polypeptide comprising amino acid 1 to 69 of SEQ ID NO:2;

(b) a polynucleotide encoding a polypeptide comprising amino acid 1 to amino acid 69 set forth in SEQ ID NO:4;

(c) a polynucleotide encoding a polypeptide comprising amino acid 1 to amino acid 74 set forth in SEQ ID NO:6;

(d) a polynucleotide which is complementary to the polynucleotide of (a), (b) or (c); and

(e) a polynucleotide comprising at least 15 consecutive bases of the polynucleotide of (a), (b), (c) or (d).

2. The polynucleotide of Claim 1 wherein the polynucleotide is DNA.

3. The polynucleotide of Claim 1 wherein the polynucleotide is RNA.

4. The polynucleotide of Claim 2 which encodes the polypeptide comprising amino acid 1 to 69 of SEQ ID NO:2.

5. The polynucleotide of Claim 2 which encodes the polypeptide comprising amino acid 1 to 69 of SEQ ID NO:4.

6. The polynucleotide of Claim 2 which encodes the polypeptide comprising amino acid 1 to 74 of SEQ ID NO:6.

7. A recombinant vector comprising inserting a polynucleotide according to claim 1, wherein said member is selected from (a), (b) and (c) and said polynucleotide is DNA.

8. A recombinant host cell comprising inserting a polynucleotide according to claim 1, wherein said member is selected from (a), (b) and (c) and said polynucleotide is DNA.

9. A process for producing a polypeptide comprising expressing a polypeptide encoded by the host cell of claim 9 and recovering said polypeptide.

10. An isolated polynucleotide according to claim 1, comprising a polynucleotide having at least 95% identity to a member selected from the group consisting of:

(a) a polynucleotide comprising nucleotides 106 to 312 of SEQ ID NO:1;

(b) a polynucleotide comprising nucleotides 103 to 309 of SEQ ID NO:3;

(c) a polynucleotide comprising nucleotides 109 to 330 of SEQ ID NO:5;

(d) a polynucleotide which is complementary to the polynucleotide of (a), (b) or (c); and

(e) a polynucleotide comprising at least 15 consecutive bases of the polynucleotide of (a), (b), (c) or (d).

11. An isolated polynucleotide comprising a polypeptide having at least 95% identity to a member selected from the group consisting of:

(a) a polynucleotide which encodes a mature polypeptide having the amino acid sequence expressed by the human cDNA contained in ATCC Deposit No. 97401;

(b) a polynucleotide which encodes a mature polypeptide having the amino acid sequence expressed by the human cDNA contained in ATCC Deposit No. 97402;

(c) a polynucleotide which encodes a mature polypeptide having the amino acid sequence expressed by the human cDNA contained in ATCC Deposit No. 97403;

(d) a polynucleotide which is complementary to the polynucleotide of (a), (b) or (c); and

(e) a polynucleotide comprising at least 15 consecutive bases of the polynucleotide of (a), (b), (c) or (d).

12. A recombinant vector comprising inserting a polynucleotide according to claim 11, wherein said member is selected from (a), (b) and (c) and said polynucleotide is DNA.

13. A recombinant host cell comprising inserting a polynucleotide according to claim 11, wherein said member is selected from (a), (b) and (c) and said polynucleotide is DNA.

14. A process for producing a polypeptide comprising expressing a polypeptide encoded by the host cell of claim 13 and recovering said polypeptide.

15. A polypeptide comprising a member selected from the group consisting of:

(a) a polypeptide comprising amino acid 1 to 69 of SEQ ID NO:2;

(b) a polypeptide comprising amino acid 1 to 69 of SEQ ID NO:4;

(c) a polypeptide comprising amino acid 1 to 74 of SEQ ID NO:6;

(d) a polypeptide which is at least 95% identical to the polypeptide of (a), (b) or (c).

16. The polypeptide of Claim 15 wherein the polypeptide consists of amino acid 1 to amino acid 69 of SEQ ID NO:2.

17. The polypeptide of Claim 15 wherein the polypeptide consists of amino acid 1 to amino acid 69 of SEQ ID NO:4.

18. The polypeptide of Claim 15 wherein the polypeptide consists of amino acid 1 to amino acid 74 of SEQ ID NO:6.

19. A compound which inhibits activation of the polypeptide of claim 15.

20. An antibody against a polypeptide of claim 15.

21. An antagonist against the polypeptide of claim 15.

22. An isolated polypeptide comprising:

(a) a mature polypeptide encoded by a polynucleotide which is at least 95% identical to a polynucleotide sequence which encodes a mature polypeptide having the amino acid sequence expressed by the human cDNA contained in ATCC Deposit No. 97401;

(b) a mature polypeptide encoded by a polynucleotide which is at least 95% identical to a polynucleotide sequence which encodes a mature polypeptide having the amino acid sequence expressed by the human cDNA contained in ATCC Deposit No. 97402;

(c) a mature polypeptide encoded by a polynucleotide which is at least 95% identical to a polynucleotide sequence which encodes a mature polypeptide having the amino acid sequence expressed by the human cDNA contained in ATCC Deposit No. 97403.

23. A polypeptide according to claim 22, wherein said member is (a).

24. A polypeptide according to claim 22, wherein said member is (b).

25. A polypeptide according to claim 22, wherein said member is (c).

26. A method for the treatment of a patient having need of hESF I, II or III comprising: administering to the patient a therapeutically effective amount of the polypeptide of claim 15.

27. The method of Claim 26 wherein said therapeutically effective amount of the polypeptide is administered by providing to the patient DNA encoding said polypeptide and expressing said polypeptide in vivo.

28. A method for the treatment of a patient having need to inhibit a hESF I, II or III polypeptide comprising: administering to the patient a therapeutically effective amount of the compound of Claim 15.

29. A process for diagnosing a disease or a susceptibility to a disease related to an under-expression of the polypeptide of claim 15 comprising:

determining a mutation in a nucleic acid sequence encoding said polypeptide.

30. A diagnostic process comprising:

analyzing for the presence of the polypeptide of claim 15 in a sample derived from a host.

31. A method for identifying compounds which bind to and inhibit activation of the polypeptide of claim 15 comprising: contacting a cell expressing on the surface thereof a receptor for the polypeptide, said receptor being associated with a second component capable of providing a detectable signal in response to the binding of a compound to said receptor, with an analytically detectable hESF I, II or III polypeptide and a compound under conditions to permit binding to the receptor; and

determining whether the compound binds to and inhibits the receptor by detecting the absence of a signal generated from the interaction of the hESF I, II or III with the receptor.

32. A method according to claim 31, wherein said member is (a).

33. A method according to claim 31, wherein said member is (b).

34. A method according to claim 31, wherein said member is (c).